REMARKS

Reconsideration and allowance in view of the foregoing amendment and the following remarks are respectfully requested.

Rejection of Claims 1-3, 7, 9-13, 15-30, 34-54 and 56-57 Under 35 U.S.C. §102(e)

The Office Action rejects claims 1-3, 7, 9-13, 15-30, 34-54 and 56-57 under 35 U.S.C. §102(e) as being anticipated by Beyda et al. (U.S. Patent No. 6,487,277) ("Beyda et al."). Applicant respectfully traverses this rejection and submits that Beyda et al. fail to teach each limitation of the claims as asserted in the Office Action.

We first turn to claim 1. The Office Action asserts on page 2 that Beyda et al. teach a recognizer that spots at least one of a plurality of meaningful phrases in an input communication of the user including verbal input and non-verbal input, citing column 8, lines 29-37. In this portion of Beyda et al., they teach a navigation approach to a menu system. Starting at column 8, line 5, they introduce approaches to navigating a menu with various prompt messages. They introduce a concept of levels of prompts within the menu system. For example, Figure 3 illustrates that after the welcome prompt 202 and a first row of prompts 204. Within box 204A is shown (1,1), which represents prompt level 1 and the first prompt in that level. Thus, box 204C includes (1,3) which represents prompt 3 in level 1. (206A to 206C and 208A to 208C are in prompt level 2 with prompts 1-6). Row 210 shows 210A – 210C with prompt level 3 having three different prompts. As can be appreciated, Figure 3 shows the prompt levels in the menu. Turning to the portion cited to the Office Action, we note that lines 29-37 of column 8 teach that if the user is at prompt level 3 but wishes to return to prompt level 1, the user may press (*,1) or say "back, 1" to return to prompt level 1. In this case, the user will be presented with prompt 204A. They teach an alternative approach in which the system can be configured such that the user may return backwards a predetermined number of levels according to the user input. For example, the user may press * followed by a 2 or say "back 2" in order to return from prompt level 3 up to

prompt level 1. The Office Action asserts that this is the equivalent of a recognizer that spots one of a plurality of meaningful phrases in an input communication of the user including verbal input and non-verbal input. Applicant respectfully traverses this analysis and notes that the input provided related to jumping up or down prompt levels is not appropriately equated with "meaningful phrases" in claim 1. Furthermore, it is clear that what is taught in this portion of Beyda et al. relates to the user either using a keypad to provide input such as a (*) followed by a 1, a (*) followed by a 2 or providing simple verbal input such as "back 1" or "back 2". Accordingly, Applicant respectfully submits that what is taught is not a combination of verbal input and non-verbal input, but rather verbal input or non-verbal input. Accordingly, this feature is not taught for several reasons by Beyda et al.

Next, the Office Action equates the recitation of each of the plurality of meaningful phrases having an association with at least one of a predetermined set of task objectives with the teachings in column 9, line 65 – column 10, line 17. Applicant respectfully traverses this analysis and submits that again the reference teaches how a user can interact with a system that presents a series or a sequence of prompts in a standard order. At any stage along this dialog, the user may select a prompt by speech or keypad entry at step 406. This step is shown in Figure 5. The user's selection of a prompt may include skipping to a prompt at another level as discussed above or another prompt within the same level or it may include proceeding through the prompts in a standard fashion. Beyda et al. further teach that in either case the CPU records the selection and associates with the user's identification number in step 408. The user is then navigated to the appropriate level at step 410 whereupon the user makes a desired selection in step 412. The CPU then performs the desired function and records the final selection in step 414. If the user has not already done so, the user may store an identification code in step 416 which the CPU will store for later use. The next time the user logs in to the system the user will be given the option of selecting the recorded destination path as described above. Applicant respectfully submits that this portion of

Beyda et al. fail to teach that each of the plurality of meaningful phrases has an association with at least one of a predetermined set of task objectives. This is not taught for several reasons. First, as discussed above, the user of input such as *1 or back 1 cannot be interpreted as the same type of input as a meaningful phrase that is input by the user that includes verbal input and non-verbal input. Again, this portion of Beyda et al., similar to the portion in column 8, only teaches either speech input or keypad entry. Next, there is simply no reference to a predetermined set of tasks objectives. What is taught is storing a user identification code which the next time the user logs into the system the user may be given an option of selecting the recorded destination path as described above. The destination path is simply a path which provides a shortcut for the user to skip prompts in a dialog to another level. Accordingly, what is taught by Beyda et al. is that the user's selection of a prompt skipping input may simply be saved in memory and retrieved based on the user's identification code for later usage. Applicant respectfully submits that there is nothing in this portion of Beyda et al. that identifies an association of each of a plurality of meaningful phrases with at least one of a predetermined set of task objectives.

Next, the Office Action equates the step of the limitation in claim 1 of a task classifier that makes a classification decision based at least partly on the spotted at least one of the plurality of meaningful phrases. Column 7, lines 13-31, again teach the features related to presenting prompt messages related to the user in various hierarchical prompt levels. The teachings in this portion of Beyda et al. are essentially similar to what is discussed above wherein the user may be able to skip to a different prompt level or to a different prompt by selecting a key, for example, the # key or the * key while at a particular prompt. Again, Beyda et al. teach an alternative approach where the user may speak "next" to jump to the next prompt. There is no discussion in this portion of Beyda et al. related to task classification or a task classifier that makes any kind of classification decision based at least partly on the spotted at least one of the plurality of meaningful phrases. Another reason this

is not taught in this portion of the reference is that the reference merely teaches acting on the received input. For example, if the user is listening to a current prompt at 204A and says the word "next" then the system jumps from prompt 204A to prompt 204B. Absent from this approach that is taught in Beyda et al. is any reference to classification decisions. Rather the approach taught is to receive a simple command input related to navigating prompts and simply acting upon that without any intermediate processing that appears to be associated with any kind of classification decision.

Accordingly, Applicant respectfully submits that Beyda et al. fail to teach any of the limitations found in claim 1 as is discussed above. Accordingly, Applicant respectfully submits that claim 1 is patentable and in condition for allowance. Claims 2, 3 and 7 each depend from claim 1 and recite further limitations therefrom. Accordingly, Applicant respectfully submits that these claims are patentable as well.

Applicant also notes that each dependent claim is independently patentable. For example, claim 2 teaches wherein the meaningful phrases are expressed in a multimodal form. As discussed above, Beyda et al. limit their teachings either to input that is either keyed or speech. Accordingly, they do not teach meaningful phrases that are expressed in a multimodal form. Claim 3 depends from claim 2 and recites wherein the multimodal form includes input from at least one channel which is not taught or suggested in the reference. Claims 9 and 10 each depend from claim 1 and recite further limitations therefrom. Accordingly, these claims are patentable as well.

Claim 11 depends from claim 9 which depends from claim 1 and recites further limitations with respect to a dialog module that prompts the user to provide a feedback response that includes confirmation with respect to at least one of the set of task objectives determined in the classification decision. The Office Action asserts that Beyda et al. teach this at columns 7, 8 and 9. However, Applicant respectfully traverses this rejection and submits that as discussed above there is nothing with respect to a classification decision

taught in these portions of the reference and Applicant further submits that there is nothing that is taught including a confirmation with respect to at least one of the task objectives that is taught in the reference. Accordingly, claim 11 is patentable.

Claim 12 depends from claim 1 and recites wherein the task classifier routes the input communication based on the classification decision. The Office Action on pages 3 and 4 cites the same portions of Beyda et al. to reject this claim. Applicant respectfully submits that there is no teaching in the reference regarding routing the input communication based on a communication decision. In other words, the input that has been discussed relative to the teachings of Beyda et al. is input relating to navigating through a menu system using input such as inputting via a keypad *1 or inputting via speech navigation information such as "down 2". There is no teaching that the input (*,1) is being routed any place. Rather, Beyda et al. simply teach that that input is acted upon. Accordingly, claim 12 is patentable. Claim 13 depends from claim 12 and further recites that the task objective is performed after the input communication is routed by the task classifier. Again, Applicant respectfully submits that this is not taught in the reference inasmuch as there is no routing of the input communication and thus task objective cannot be performed after the input communication is routed within the teachings of the prior art.

Claim 15 depends from claim 1 and recites further limitations therefrom and is therefore patentable. Claim 16 depends from claim 1 and recites wherein the classification decision and the corresponding input communication of the user are collected by the system for automated learning purposes. Applicant respectfully submits that the same portions of Beyda et al. are cited to reject this claim. Applicant respectfully submits that there is no reference to automated learning purposes within the portions cited by the Examiner.

The Office Action on page 4 asserts that claim 17 is taught in Beyda et al. and notes that performing the action is 100% useful. However, claim 17 recites wherein the association between the plurality of meaningful phrases and the predetermined set of task objectives is

based at least partly on a measure of usefulness of one of the plurality of meaningful phrases to a specified one of the predetermined task objectives. While performing the action may be 100% useful, Applicant respectfully submits that the limitation of claim 17 requires a measure of usefulness of one of the plurality of meaningful phrases to a specified one of the predetermined task objectives. Such measurement is not taught or suggested in the reference. Carrying out the instructions on which prompt level 2 proceed to is simply carried out in Beyda et al. Accordingly, claim 17 is patentable and in condition for allowance. Claim 18 depends from claim 17 and recites wherein the usefulness measure is a salience measure. Such feature is simply not taught or suggested in column 7 or column 8 or Beyda et al.

Claim 19 depends from claim 18 and further defines the salience measure and how it is represented as a conditional probability of the task objective being requested given the appearance of one of the plurality of meaningful phrases in the input communication and wherein the conditional probability is the highest value in a distribution of conditional probabilities over the set of predetermined task objectives. Again, the Office Action on page 5 asserts that when a phrase is understood it is 100% probable of the task objective being performed of one of many task objectives. However, Applicant traverses this analysis and respectfully submits that there is no measurement taught in Beyda et al. and thus the salience measure in claim 19 is not taught or suggested in the reference.

Claim 20 also references the salience measure and accordingly is patentable as well. Claim 21 depends from claim 1 and recites wherein the association between the meaningful phrases and the predetermined task objectives is based at least partly on a measure of commonality with a language of the meaningful phrases. This feature is not taught or suggested in the reference. The Office Action asserts that there is 100% commonality in Beyda's English language. However, again there is no teaching or suggestion of making a measurement of commonality within the language of the meaningful phrases. Accordingly, inasmuch as Beyda et al. teach carrying out the necessary action when it receives input such

as *,] there is simply no teaching regarding measuring such a commonality as is recited in claim 21. Accordingly, claim 21 is patentable. Claims 22 and 23 each depend from claim 21 and further discuss the measure of commonality or a mutual information measure exceeding a predetermined threshold. These features are not taught or suggested in the prior art reference and accordingly, these claims are patentable as well. Claim 24 depends from claim 1 and recites that the task classifier makes the classification decision using a confidence function. The Office Action notes that if the system is not confident it will not perform the action. However, Beyda et al. teach acting on the input and provide no details regarding a confidence function or performing any analysis on the confidence function. Furthermore, as discussed above, there is no discussion in the reference regarding a classification decision. Accordingly, claim 24 is patentable and in condition for allowance.

Claim 25 recites that the input communication from the user represents a request for at least one of the set of predetermined task objectives. On page 6 of the Office Action, there is no recitation of any portion of Beyda et al. that is asserted to teach this limitation. Accordingly, inasmuch as the Office Action is silent on this issue, Applicant respectfully submits that claim 25 is patentable and in condition for allowance. Claim 26 depends from claim 1 and recites further limitations therefrom. Applicant respectfully submits that this claim is patentable as well. Claim 27 depends from claim 1 and recites that each of the verbal input and the non-verbal in put are directed to one of the set of predetermined task objectives and each of the verbal and non-verbal input is labeled with one task objective to which it is directed. Applicant respectfully submits that this is clearly not taught in the prior art and accordingly claim 27 is patentable.

Claim 28 recites an automatic routing system and includes a recognizer, a task classifier and a task router that routes the user's request in order to perform at least one of the task objectives based on the classification decision. The Office Action cites the same portions, columns 7, 8 and 9 of Beyda et al. as teaching these limitations. Applicant

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respectfully traverses this rejection and submits that based on the discussion above that by a preponderance of the evidence it is clear that Beyda et al. fail to teach these features. Applicant further submits that claim 28 recites a task router that routes the user's request in order to perform at least one of the task objectives based on the classification decision. This feature is not taught in the reference inasmuch as they merely teach navigating prompts in a menu system and wherein the input is merely used to jump to another prompt. There is no discussion of routing a user's request in order to perform at least one of the task objectives. Accordingly, Applicant respectfully submits that claim 28 is patentable and in condition for allowance. Claims 29, 30, 34, 36-40, 42-54 each depend from claim 28 and recite further limitations therefrom. The limitations related to these claims have been discussed above. Accordingly, Applicant respectfully submits that these claims are patentable for the same reasons as their corresponding claims above. Claim 56 depends from claim 1 and further recites an interpretation module configured to apply a confidence function based on a probabilistic relation between the spotted at least one of the plurality of meaningful phrases and the input communication of the user and at least one of the predetermined task objective wherein the task classifier makes the classification decision based in part on a results of the applied confidence function. This is simply not taught or suggested in the reference. Claim 57 depends from claim 28 and recites a similar limitation. There is no rejection of claim 57 in the Office Action. Accordingly, Applicant respectfully submits that claim 57 is patentable as well.

CONCLUSION

Having addressed all rejections and objections, Applicant respectfully submits that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited. If necessary, the Commissioner for Patents is authorized to charge or credit the **Law Office of Thomas M. Isaacson, LLC. Account No. 50-2960** for any deficiency or overpayment.

Respectfully submitted,

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By: _____

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